UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,546	11/12/2003	Feng-Wei Chen Russell	RSW920030186US1	6883

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EXAMINER
TIMBLIN, ROBERT M

ART UNIT	PAPER NUMBER
2167	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<table>
<tr>
<td rowspan="3">Office Action Summary</td>
<td>Application No.</td>
<td>Applicant(s)</td>
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<td>10/706,546</td>
<td>RUSSELL ET AL.</td>
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<td>Examiner</td>
<td>Art Unit</td>
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<td>Robert M. Timblin</td>
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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>20 February 2007</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-31</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-31</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

    1.☐ Certified copies of the priority documents have been received.

    2.☐ Certified copies of the priority documents have been received in Application No. _____.

    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This office action corresponds to application 10/706,546 filed 11/12/2003.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/20/2007 has been entered.

Response to Amendment

The Applicant herein has amended claims, 1, 9, 16, and 24. No new claims have been added leaving claims 1-31 pending prosecution.

Claim Objections

Claim 1 is objected to because the Examiner believes the Applicant intends to mean "a number of unique matching processes" instead of "a number unique of matching processes." That is, claim 1 is objected to for a minor informality of word placement.

Claims 14, 22, and 30 are objected to because as they depend on claims 9, 16

and 24 respectively, it is unclear which matching resource they refer to in the claims

they depend on. As can be interpreted, independent claims 22 and 30 could have two

different matching resources (i.e. "an matching resource" in the first limitation and "a

matching resource" in the last limitation.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 16 is rejected under 35 U.S.C. 101 because it fails to suggest the use of

hardware in the computerized system. Without the use of hardware in a system claim,

the claim can be construed as software per se (or functional descriptive material) and

therefore is not statutory under 35 U.S.C. 101. See MPEP 2106.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall·have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Gorelik

et al. ('Gorelik' hereinafter) U.S. Patent Application 2005/0055369 A1.

With respect to claim 1, Gorelik teaches a computer-implemented method for mapping a user data schema to a mining model schema, comprising:

matching columns of the user data schema to corresponding columns of the mining model schema ([0031, 0058, 0118]) to provide a mapping (abstract, [0015] and [0198]) by performing a number of unique matching processes [0536] in sequence until a match is found, ([0055] and 606 of figure 6) wherein at least one of the number of unique matching process does not utilize an external matching resource (metadata index; [0205]);

determining whether data within matching columns of the user data schema has a data type different than data within the corresponding columns of the mining model schema (binding; [0048] and correlation [0052]);

transforming the data within the matching columns of the user data schema if the data type is determined to be different (transformation function ([0059], type conversion rules [0237], and transformation discovery [0048-0052]); and

updating a matching resource based on the· mapping (updating the metadata index [0221]).

With respect to claims 2, 17, and 25, Gorelik teaches providing an opportunity to manually alter the mapping after transforming the data ([0159-0160]); and

presenting a final view of the mapping after providing the opportunity, wherein the updating step is performed after the final view is presented (figures 7A-7B).

Claims 17 and 25 are essentially similar to claim 2 and therefore are rejected for the same rationale.

With respect to claims 3, 10, 18, and 26, Gorelik teaches determining whether names of the columns of the user data schema exactly match names of the columns of the mining model data schema (absolute match [0055]).

Claims 10, 18, and 26 are essentially similar to claim 3 and therefore are rejected for the same rationale.

With respect to claims 4, 11, 19, and 27, Gorelik teaches determining whether the names of the columns of the user data schema are similar to the names of the columns of the mining model data schema based on the matching resource ([0198]-[0206]).

Claims 11, 19, and 27 are essentially similar to claim 4 and therefore are rejected for the same rationale.

With respect to claims 5, 12, 20, and 28, Gorelik teaches determining whether the names of the columns of the user data schema match the names of the columns of the mining model schema based on one or more formulae (table 1 of page 9 and [0210] to at least [0220].

Claims 12, 20, and 28 are essentially similar to claim 5 and therefore are rejected for the same rationale.

With respect to claims 6, 13, 21, and 29, Gorelik teaches determining whether the data within the columns of the user data schema corresponds to the data within the columns of the mining model data schema (corresponding values [0052]-[0053]).

Claims 13, 21, and 29 are essentially similar to claim 6and therefore are rejected for the same rationale.

, **With respect to claims 7, 14, 22, 30**, Gorelik teaches the matching resource is selected from the group consisting of a thesaurus, a dictionary and a similarity threshold (metadata index [0205] and Correlation Threshold [0102)].

Claims 14, 22, and 30 are essentially similar to claim 7 and therefore are rejected for the same rationale.

With respect to claims 8, 15, 23, and 31, Gorelik teaches populating a schema consolidation table with names of the columns of the mining model schema, prior to the matching step (Value Match Table [0094]-[0095]); and

updating the schema consolidation table with names of the matching columns of the user data schema, during the updating step (pseudocode after [0094]).

Claims 15, 23, and 31 are essentially similar to claim 8 and therefore are rejected for the same rationale.

With respect to claim 9, Gorelik teaches A computer-implemented method for

mapping a user data schema to a mining model schema, comprising:

populating a schema consolidation table with names of columns of the mining

modeled schema ([0031], VMT [0094]-[0095] and figures 7A-B);

mapping the user data schema to the mining model schema by matching

columns of the user data schema to corresponding columns of the mining model

schema ([0031, 0058, 0118]) to provide a mapping (abstract, [0015] and [0198]) by

performing a number of unique matching processes [0536] in sequence until a match is

found ([0055] and 606 of figure 6), wherein at least one of the number of unique

matching process does not utilize an external matching resource (metadata index;

[0205]);

determining whether data within matching columns of the user data schema has

a data type different than data within the corresponding columns of the mining model

schema (binding; [0048] and correlation [0052]);

transforming the data within the matching columns of the user data schema if the

data type is determined to be different (transformation function (transformation function

([0059], type conversion rules [0237], and transformation discovery [0048-0052]); and

providing an opportunity to manually alter the mapping after transforming the

data ([0159-0160] and figure 7A-B);

presenting a final view of the mapping after providing the opportunity to manually

alter the mapping (figure 7B); and

updating a matching resource and the schema consolidation table based on the

mapping (updating the metadata index [0221] and figures 7A-C).

With respect to claim 16, Gorelik teaches A computerized system for mapping

a user data schema to a mining model schema, comprising:

a column matching system for matching columns of the user data schema to

corresponding columns of the mining model schema ([0031, 0058, 0118]) to provide a

mapping (abstract, [0015] and [0198]);

a model differentiation system for determining whether data within matching

columns of the user data schema has a data type different than data within the

corresponding columns of the mining model schema (binding; [0048] and correlation

[0052]) by performing a number of unique matching processes [0536] in sequence until

a match is found ([0055] and 606 of figure 6), wherein at least one of the number of

matching processes does not utilize an external matching resource (metadata index;

[0205]);

a data transformation system for transforming the data within the matching

columns of the user data schema if the data type is determined to be different ([0059],

type conversion rules [0237], and transformation discovery [0048-0052]); and

an update system for updating a matching resource based on the mapping

(updating the metadata index [0221]).

With respect to claim 24, Gorelik teaches A program product stored on a recordable medium for mapping a user data schema to a mining model schema, which when executed, comprises:

program code for matching columns of the user data schema to corresponding columns of the mining model schema to provide a mapping ([0031, 0058, 0118]) to provide a mapping (abstract, [0015] and [0198]) by performing a number of unique matching processes [0536] in sequence until a match is found ([0055] and 606 of figure 6 described on page 15), wherein at least one of the number of matching processes does not utilize an external matching resource (metadata index; [0205]);

program code for determining whether data within matching columns of the user data schema has a data type different than data within the corresponding columns of the mining model schema (binding; [0048] and correlation [0052]);

program code for transforming the data within the matching columns of the user data schema if the data type is determined to be different ([0059], type conversion rules [0237], and transformation discovery [0048-0052]); and

program code for updating a matching resource based on the mapping (updating the metadata index [0221]).

Response to Arguments

Applicant's arguments with respect to claims 1-31 have been considered but are moot in view of the new ground(s) of rejection.

As recited above, Gorelik teaches "...a number of unique matching processes..." at least in paragraph [0536].

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert M. Timblin whose telephone number is 571-272-5627. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Cottingham can be reached on 571-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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